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TEACHING ADULT HEALTH CARE WORKERS IN RURAL CHINA

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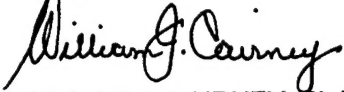
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A handwritten signature in black ink, appearing to read "William J. Cairney". The signature is fluid and cursive, with a large initial "W" and "C".

WILLIAM J. CAIRNEY, Ph.D.
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TEACHING ADULT HEALTH CARE WORKERS IN RURAL CHINA

ABSTRACT

Using common principles of adult education, young health care practitioners in rural north China are trained in a three-month upgrade course. Foreign medical doctors with the American Non-government Organization (NGO), Evergreen, along with local medical doctors, do the teaching and clinical mentoring. Focusing on commonly seen health problems, the course uses problem-based, participatory teaching methods. Students find these teaching methods to be conducive to information recall, and find the skills gained during the course to be practical and useful for their work upon return to their rural clinics.

BACKGROUND:

Evergreen is an American Non-government Organization which provides services and training in Shanxi Province, located in north China. We have been in operation five years, during which we have assembled a team of medical professionals who are providing medical training to adult health care workers in rural Shanxi. The Medical Team is made up of four physicians and one program officer (the author) all from North America. We average five years' experience living in China so culturally and language-wise, we are able to function smoothly here.

THE TRAINING PROGRAM:

Our focus is on training using common principles of adult education. There are three primary contexts in which we train. First, the Cobbler Program – a three-month upgrade course for young Township Health Center clinicians. These clinicians have a junior high education, followed by three years of training in basic medicine in the Public Health School. They average 25 years of age and three years of experience working in the clinic. Second is an ongoing program of in-service training for the 79 workers who carry out the Well Baby program which we support. These workers range in age from 25 to 49 (most around 40) and in most cases lack formal medical training. However, most have served as village doctors since their late teens, so they have extensive clinical experience. Third is teacher training which we hold for the local doctors who teach in the Cobbler Program.

In each of these training settings, we strive to offer training which has the following distinctives:

- **Clinical.** One third of all training time is actually spent doing with the students what we are teaching them to do. For example, in the Well Baby Program, we visit homes and examine infants with the workers alongside us. In the Cobbler Program, every Monday, Wednesday and Friday morning is spent in the clinic with groups of two to three students seeing patients under the tutelage of foreign and Chinese medical staff.

- **Problem-based.** Through extensive survey work in the homes, hospital statistics and feedback from former students we have now arrived at a course in the Cobbler Program which teaches the presentation, diagnosis and treatment of the 25 most common health problems they meet. We also teach history-taking, physical examination and disease prevention, but much of the time is spent equipping the learners to tackle the common problems they will meet. The teaching style we use also emphasizes a problem-based approach in that we use patient cases (both live and on paper) extensively.
- **Practical.** We avoid teaching techniques which they would not be able to duplicate in their own clinics or for which they don't have the necessary equipment. We teach them to maximally and safely use the drugs which they now have access to and avoid introducing them to fancy and expensive drugs which they cannot obtain or which the local people cannot afford. In a lecture I give on rickets and nutrition, I distribute various locally available milk products and ask them in groups to determine which of the products provides the best nutrition and the right amount of vitamins to prevent rickets as well as which is the most affordable. (They are always amazed to learn that the most nutritional product and the most affordable is the locally produced and unspectacularly packaged fresh cow's milk and not the sugar-loaded, jazzy milk products shipped out from Beijing!)

We train in a health school located in the rural setting avoiding taking students out of the environment in which they themselves work. This prevents them from excusing themselves from certain activities or coming up with comments like, "But you don't know what my clinic is like. We don't even have running water. How can you keep your hands clean?" We don't have running water in our training clinic either, get busy and figure out how to keep your hands clean!"

- **Hands-on.** We use teaching methods which will allow them to get physically involved in the activity. For example, when teaching physical examination, we use an anatomy model and allow them to work with the organ parts. We also divide them up and have them practice the techniques on each other. To that end, we also test them on their clinical skills, not just on written work, so they know clinical work is an important part of the training.
- **Community-based.** These learners are part of the community, so we try to key off their real experiences in the community and train them to be useful clinicians who will go on to actually serve the community needs. For example, we spend one day each term screening blood pressures, examining children and seeing patients out on the street. We have activities which will open their eyes to the community such as learning about what drugs are available for treating hypertension by going around and surveying the local pharmacies and getting an idea of the cost burden on patients.

- **Dynamic.** We make necessary changes and respond to the real situations as they present themselves so as to assure maximal effectiveness. For example, this term we have several students whose basic anatomy and physiology knowledge is lacking so we have added a class two evenings a week to supplement their weak areas. We respect the experience and the suggestions of our students hoping to meet their needs as best as possible. For example, they felt the time spent on EKG reading was too short, so we added several afternoons of EKG reading practice. We also keep EKG strips in our book bags so that during slow times in the clinic we can practice reading them with the students, preparing learning opportunities on the spur of the moment.
- **Within the Chinese system.** We cannot change our foreignness and are not apologetic about introducing certain foreign ideas which we think are useful and applicable. However, in order to enhance our potential for long-term impact, we matriculate all our work into the existing Chinese health care system. For example, the Well Baby work which we now support is actually work which the Chinese workers are already supposed to be doing, but because of financial limitations and low skill level, until now have not been doing. We have come along to provide some funding to carry it out, but even more importantly, to train these workers how to do it thoroughly and well. It has been so well received that two of our leading technical experts who go around training the workers now are the two women in the Maternal and Child Health office who had been responsible for doing this work, but until now had never done it and didn't know how. Although the work is very difficult, they are enjoying this more than just sitting in their offices which they had done in the past, because now they are being trained how to do it in a friendly and supportive environment. It is also being demonstrated to them by qualified doctors so they can learn on the job.
- **Critical.** We expect our work to be effective. We don't just begin a course or a program and then just let it unfold like the playing of a tape. We frequently assess our work effectiveness. We discuss issues with the students. We invite in outside experts to give advice. When problems arise, we take responsibility for them. We don't blame the students for being lazy or stupid. We look first to ourselves and ask how we can change what we are doing to improve our training.
- **Modeling.** People learn best by observing. As mentioned above, we have extensive bedside time in all our training. In our teacher training course, we didn't only tell them the importance of using case studies in teaching. We actually did a case study with them. We didn't only tell them how to set learning objectives. In the teacher training course we actually set learning objectives. Then when we taught on the case, we simply pointed out what we had done with them and what the purpose of it was. Then we asked, "Was it effective? Have we done what we set out to do?"

When they saw the relationship between the setting of teaching objectives, and, at the end of the training, their ability to actually do what we had set out to train them to do, it was very convincing.

Emphasis on communication success. In good communication, which is the heart of good teaching, the onus is on the communicator to communicate clearly. We are reluctant to blame our students when something is not understood. We emphasize that what the student hears is not what I think I have said, but what he or she actually hears me to say. And sometimes there is a big difference between what I said and what the listeners actually heard. I call this recipient-centered training. The recipient or beneficiary of a given training program or class is the final arbiter of communication success and training success. I might have a strong syllabus and excellent teaching notes, but the bottom line of teaching success is what the students actually learned or what skills they acquired.

RESULTS AND DISCUSSION

Over three years', we have graduated 51 (five classes) Cobbler Program students. Common feedback from our students is that what we teach is easy to grasp and easy to remember. We strive to be realistic in what we teach, focusing on practical and real issues. Much medical training in China is theoretical in nature with little consideration of the student's backgrounds, comprehension level, experiences or working conditions. We avoid teaching information which cannot be used in their own place of work. The students appreciate this. In China, most education is political and policy-motivated so they find our focus on the real situation to be refreshing.

In our program, we have quizzes each Monday afternoon on the previous week's content. To our amazement, these quizzes are one of the things students appreciate most about our program. I believe they appreciate the quizzes because they reinforce what we have taught and assure that we actually test them on what we teach (as opposed to some standardized final exam which they are accustomed to). The quizzes lessen the anxiety and pressure of one all-consuming final exam, which, in traditional teaching, alone determines their final grade. Regular assessment helps them assess their mastery of the content in an ongoing way. Also, to lessen the pressure imposed on them, we allow them to throw out their lowest quiz score knowing that everyone is capable of a bad day. These are the reasons the students so appreciate the weekly quizzes.

The students spend one third of their training time with experienced physicians in the clinic seeing patients. The students report the biggest benefit of this time to be the opportunity to use in the clinic what they have learned in the classroom. We do not have the luxury of arranging a patient with precisely the condition they have studied, but because we are teaching common local health problems, eventually they will see patients with most of the conditions we have taught. In our last course, seventy percent

of our students reported having seen between 51 and 100 patients during the three months of study. 20% reported having seen more than 100. They have gained ample hands-on clinical experience by the time they complete our course.

We avoid promoting the notion that as the experts we have nothing to learn from the students and that the students have nothing to contribute to the learning process. We try to respect the students as professionals and to some extent as peers. As is true anywhere, the students appreciate being respected. Gradually this respect gives them the boldness and the comfort to participate in class activities. However, China is a hierarchical society and at first some students do not know how to deal with this respect and with the freedom to participate in class activities. Some students will take advantage of this opportunity in a negative way and cause trouble or even disrupt what the teacher is trying to do. Slowly this situation improves, but it does demonstrate that the extent to which one can use participatory teaching methods depends on the culture, experiences, and age of the learners. After having some success and a few failures in this area, we have concluded that our primary purpose is effective teaching, not the implementation of a certain method. Thus we have to be dynamic and thoughtful in our lesson preparation and in our teaching methods.

Because of the hierarchical system, small group work is hard to implement in China, and, in fact, from student feedback we have found they don't much enjoy it. They prefer the expert to just tell them the "right answer" rather than for people whom they each consider to be inferior to themselves (their classmates) to waste their time giving their opinions. They often don't listen to the person who is speaking and show little respect for each other in group discussion. People are also reluctant to speak up for fear of giving the wrong answer. In China, leaders at almost every level are designated by the government, so people don't naturally take initiative and provide leadership when left in an ambiguous situation. Consequently, small groups often go nowhere, as nobody takes initiative to get it going. We still use small groups in our training, but we must be more directive than we would be with westerners. For example, we assign a group leader, we make the discussion very directed, we tell the groups exactly what we expect them to do, we make the presentation by the group leader rather formal and we ask students to comment directly rather than allowing for a free discussion. In this way, the students seem to be appreciating group activities more.

From our experience, we have found that after around age 35, it is difficult to train people for something they are not personally passionate about. However, regardless of their preparedness to learn, participatory teaching methods still work just as well among the older students. In fact, among the poorly educated village doctors we train in the Well Baby Program (most of whom are around age 40), the older they are, the more successful are the active participatory teaching methods.

To our amazement, students often praise the teacher who, in a very traditional way, reads a long complicated, expert-sounding manuscript in class. It appears they

perceive it as valuable, even though, to our observation, they have little awareness of their own comprehension level or of its usefulness to them. It is hard for these students to accept that it's better to grasp five useful points than to hear 20 complicated, theoretical points, which they can neither understand nor use. Sometimes they perceive our teaching methods as too simple, assuming "If I can understand what you are saying, it must not be of much value or you must not have much expertise in this area." Over time our students find what we have taught to be of much value and easy to recall and use. This issue, however, does illustrate the importance of taking into consideration the students' expectations of how they should be taught and what constitutes good teaching. Again, we need to carry out recipient-centered training. What the learners grasp and are able to use is the bottom line of excellent teaching, regardless of the teaching method used.

Because our students are relatively young, it is difficult for them to go against certain of the bad habits which colleagues in their clinics have developed. In fact, peer pressure is significant enough that they are even reluctant to change the bad habits in their own work because of the resentment or jealousy they will feel from older colleagues. As they mature and assume more responsibility in the clinic, we are confident they will be able to make significant positive contributions in how health care is carried out in their respective clinics.

Students in the Cobbler Program find most of what they learn to be useful in their places of work, and, upon returning to work, their clinic directors find them increasingly motivated to carry out health care in a thorough and conscientious way. With 51 graduates salted around this county of 134,000 people, these students are sure to have a significant impact on health care in the years to come.